

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants : Yoshiyuki MIYAGAWA et al. Art Unit : 3714
Appl. No. : 10/765,975 Examiner : Cornett B. Coburn
Filed : January 29, 2004 Conf. No. : 2821
For : VIDEO GAME WITH FAST FORWARD AND SLOW MOTION
FEATURES

REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner for Patents
U.S. Patent and Trademark Office
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Randolph Building
401 Dulany Street
Alexandria VA 22314

Sir:

This Reply Brief is in response to the Examiner's Answer dated December 3, 2009, which sets forth a period for reply extending until February 3, 2010.

Appellants note this Reply Brief is being filed under 37 C.F.R. 41.41(a)(1) and is directed to the arguments presented in the Examiner's Answer, and therefore must be entered unless the final rejection is withdrawn. Appellants are addressing points made in the Examiner's Answer and not repeating the arguments set forth in the Appeal Brief.

I. STATUS OF CLAIMS

Claims 1-10 are pending in this application with claims 3 and 8 being withdrawn from consideration. Thus, claims 1-2, 4-7, and 9-10 stand finally rejected and are the subject of this appeal.

II. GROUND OF REJECTION

Claims 1-2, 4-7, and 9-10 (*i.e.*, all pending and non-withdrawn claims) were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,313,838 to Deering (hereinafter "DEERING").

III. ARGUMENT

First Issue

In the Response to Argument section of the Examiner's Answer, on pages 4-5, the Examiner's assertions are not germane to Appellants' arguments, and merely blur the distinction between *rate of formation* of frame images, as recited by independent claims 1, 4, 6, and 9 of the present application, and the *rate of display* of frame images.

As generally set forth by the present application, traditionally, in a video game, image forming operations are repeated several tens of times for one second so that several frame images are formed for one second. The sequentially formed frame images are written in a pair of frame buffers. The frame images written in the frame buffers are read out from the pair of frame buffers and displayed in a display unit in accordance with a frame image display period (*see* ¶[0003] of the present application as filed).

Thus, at least in view of the above, the present application clearly distinguishes between “forming” frame images and “displaying” frame images. In other words, the “forming” of a frame image refers to the actual instance during which the frame image is rendered or created, such as, for example, during the period before the image is stored in the frame buffer. The “displaying” of a frame image would refer to the actual instance during which the frame image is displayed on a display unit, such as, for example, during the period after the image is read out from the frame buffer.

In this regard, independent claims 1, 4, 6, and 9 (*i.e.*, all independent claims) of the present application each generally recite, in part, that the rate of *formation* of frame images in a video game is increased when a player inputs a first instruction and that the

rate of *formation* of frame images is decreased when the player inputs a second instruction.

In the Response to Argument section of the Examiner's Response, the Examiner sets forth an example of an animated cartoon that is controlled by a player. The animated cartoon consists of three frames represented by A-B-C. According to the Examiner, the player can speed up or slow down the *display* of the animated cartoon. The player can slow down the display of the animated cartoon by repetitively displaying each of the three frames over consecutive frame periods as A-A-A-B-B-B-C-C-C. Thus, instead of displaying the three frames over three frame periods, the three frames are displayed over nine frame periods thereby decreasing the speed of the *display* of the animated cartoon by a factor of three. The Examiner further asserts that the player can speed up the movement of the animated cartoon by displaying the three frames during consecutive time periods as A-C or by displaying the three frames during consecutive time periods as A'-B'-C', wherein the period of each of A', B', and C' is less than the period of A, B, and C. Accordingly, in view of the above, it appears that the Examiner asserts that it is well known to increase or decrease the rate of *display* of frame images.

Appellants submit that the above-mentioned features of the independent claims clearly relate to the rate of *formation* of frame images, not the rate of *display* of frame images. That is, the above-mentioned features of the independent claims relate to the rate at which the frame images are rendered, not, using the example from above, the rate at which the frame images are read out from the frame buffers and displayed on the display unit.

On page 6 of the Examiner's Answer, the Examiner generally acknowledges that the rate of formation of frame images is irrelevant with respect to an animated cartoon. Specifically, the Examiner acknowledges that a film animator can take all day to form images since the images are not shown as they are created. Accordingly, at least in view of the above, Appellants respectfully submit that the Examiner's example with respect to an animated cartoon is clearly unrelated to the above-mentioned features of independent claims 1, 4, 7, and 9, and unnecessarily blurs the distinction between rate of formation of frame images and rate of display of frame images.

Second Issue

In the Examiner's Answer, the Examiner's assertions and rationale that the claimed features of increasing and decreasing the rate of formation of frame images in response to player instructions are without factual support, germane to Appellants' arguments, and fail to establish a *prima facie* case of obviousness.

In the Grounds of Rejection section, on page 4, lines 1-4, the Examiner broadly asserts that the choice of rate of formation of frame images is a matter of design choice that is well within the level of ordinary skill in the art. Furthermore, in the Response to Argument section, on pages 4-5, lines 1-16, the Examiner asserts that, in video games, a frame image is formed as the preceding frame image is displayed. That is, while one frame image is being displayed, the following frame image is being formed. According to the Examiner, if the frame images are shown before they are fully formed, the frame images "do not come out right. (Imagine an image that has the top part of a tree & the lower half is someone's leg & foot)." Accordingly, the Examiner asserts that a game

programmer must take into account the image formation time period when determining how to animate a scene in a video game.

With respect to the above, Appellants respectfully submit that the Examiner's naked assertions fail to specifically address the claimed features of independent claims 1, 4, 7, and 9 (*i.e.*, increasing and decreasing the rate of formation of frame images in response to player instructions). That is, Appellants are not arguing that a programmer does not take into account the image formation time period when developing a video game. Rather, Appellants submit that the record fails to render obvious the features of increasing and decreasing the rate of formation of frame images in response to a player's instructions, as recited by the present application.

In the Final Official Action dated December 4, 2008 and in the Examiner's Answer, the Examiner has failed to even explicitly assert that the above-mentioned features are obvious, let alone provide any factual basis or articulated reasoning to support such a conclusion. Rather, the Examiner merely asserts:

The . . . rate of formation of frame images . . . is a matter of design choice that is well within the level of ordinary skill in the art (Final Office Action, page 3, lines 1-3);

Anyone who has ever programmed a loop with a counter (which includes all programmers) could implement [a] routine . . . for fast *motion* [and] . . . slow *motion* . . . Such a construct is certainly within the level of ordinary skill. It could, in fact, be implemented by anyone who is taking his very first programming course in school (Final Office Action, pages 3, line 12 to page 4, line 11) (emphasis added); and

The choice of . . . rate of formation of frame images . . . is a matter of design choice that is well within the level of ordinary skill in the art (Examiner's Answer, page 4, lines 1-3).

With respect to the above, Appellants again note that, Appellants are not arguing that a video game programmer does not consider an image formation time period, that the

length of the image formation time period is not a design choice, or that increasing or decreasing the rate of *display* of frame images is an unobvious feature. Rather, Appellants submit that the features of increasing and decreasing the rate of *formation* of frame images in response to a player's instructions are not inherent in video games, not a mere matter of design choice, and not rendered obvious by the record.

As mandated by the Supreme Court and subsequently adopted by § 2142 of the Manual of Patent Examining Procedure:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

In the Final Official Action dated December 4, 2008 and in the Examiner's Answer, the Examiner has failed to provide any articulated reasoning why the claimed features of increasing and decreasing the rate of formation of frame images in response to player instructions are obvious. Merely asserting that the rate of formation of frame images (independently of considering the features of increasing and decreasing the rate in response to player instructions) cannot be reasonably interpreted to be a clearly articulated rationale to support a conclusion of obviousness.

The Examiner has failed to even explicitly assert that the features of the present application of increasing and decreasing the rate of formation of frame images is obvious. Thus, Appellants submit that it cannot be reasonably found that the Examiner has clearly

articulated an appropriate rationale for supporting a proposition, wherein the proposition has not even been set forth. Accordingly, Appellants respectfully submit that the Examiner has failed to set forth a *prima facie* case of obviousness in accordance with the Supreme Court mandated requirements cited in § 2142 of the Manual of Patent Examining Procedure.

Third Issue

The Examiner's assertion that U.S. Pat. No. 6,313,838 to Deering (hereinafter "DEERING") (*i.e.*, the only reference cited with particularity in the Final Office Action) is evidence that a video programmer must consider the frame formation time period, in fact, teaches against the features of the present application.

As previously submitted, DEERING merely appears to disclose maintaining a minimum frame rate in a video game. DEERING discloses estimating scene rendering time on a frame-by-frame basis to ensure that the minimum frame rate is maintained. If the minimum frame rate will not be maintained, then DEERING discloses adjusting rendering parameters, such as the number shapes, pixels, features, etc., of the frames to be displayed in order to maintain the minimum frame rate. (DEERING, col. 3, lines 55-60).

In other words, DEERING generally teaches against increasing or decreasing the frame rate, as recited by the present application. Rather, DEERING discloses modifying the information of the frames to maintain a predetermined/constant frame rate. Accordingly, Appellants respectfully submit that DEERING should not, and cannot, be relied upon to support a finding of obviousness of the feature of the present application of increasing and decreasing a rate of formation of frame images in response to player

instructions, at least because the scope and purpose of DEERING appears to be directed toward maintaining a constant, minimum frame rate. In this regard, Appellants note that the Examiner acknowledges, at least on page 3 of the Examiner's Answer, that DEERING "teaches a constant frame rate." Accordingly, Appellants submit that DEERING is inappropriately relied upon to support a finding of obviousness of the features of increasing and decreasing the frame formation rate.

Fourth Issue

In the Response to Argument section of the Examiner's Answer, on pages 6-9, the Examiner's arguments with respect to the features of: (i) matching a game progress with frame formation time periods; (ii) changing a game progress in accordance with a player's input; (iii) predicting frame formation time periods; and (iv) changing the tempo of game music in accordance with a player's input are entirely without factual support and are germane to Appellants' main arguments.

In the present Appeal, Appellants submit that the Examiner's arguments with respect to such features are irrelevant and merely cloud the real issue on appeal, *i.e.*, whether the Examiner has set forth sufficient factual support and an appropriate rationale for supporting a conclusion that the features of the present application of increasing and decreasing the rate of formation of frame images in response to player instructions are obvious.

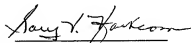
CONCLUSION

Accordingly, in view of the above-noted arguments (as well as those already of record), the Board is respectfully requested to reverse the Examiner's decision to finally reject claims 1-2, 4-7, and 9-10 under 35 U.S.C. § 103, and that the application be

remanded to the Examiner for withdrawal of the rejection over the applied documents. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 19-0089.

If there should be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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